AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1.   (currently amended) A system for measuring the profile of an object comprising:

a source creating a primary laser beam of electromagnetic energy;

an electromagnetic laser beam receiver spaced from said source for processing an output signal proportional to the girth of said object being measured, the output signal consisting of measurement data of at least one secondary laser beam formed from a portion of the primary laser beam unobstructed by the object;

a platform for providing rotational and vertical movement of said object being measured causing said object to obstruct a portion of said electromagnetic laser beam generated by said source; and

a processor for processing said output signal from said electromagnetic laser beam receiver to form a composite profile of said object measured.

2.   (original) The system of claim 1 further comprising a motion unit for providing said rotation and vertical movement.

3.   (original) The system of claim 2 wherein said motion unit includes a vertical drive device for vertically displacing said platform.

4.   (original) The system of claim 3 where said vertical drive device includes a linear screw drive.

5.   (original) The system of claim 2 wherein said motion unit includes a rotational drive device for rotationally displacing said platform.

6.   (currently amended) The system of claim [[6]] 1 wherein said vertical drive device includes a gear driven mechanism.

7.   (original) The system of claim 1 further comprising an indexing station for providing a plurality of objects to said platform, said indexing station automatically positions a respective object on said platform.

8.   (cancelled)

9.   (currently amended) The system of claim [[8]] 1 wherein said primary electromagnetic laser beam is generated by a class II laser light source.

10.   (original) The system of claim 9 wherein said laser light source is a visible red light source.

11.   (original) The system of claim 10 wherein said visible red light source includes a wavelength of 670 nanometers.

12.   (currently amended) A system for measuring the profile of an object comprising:
        a source creating a primary laser beam of electromagnetic energy;
        an electromagnetic laser beam receiver spaced from said source for processing an output signal proportional to the girth of said object being measured, the output signal consisting of measurement data of at least one secondary laser beam formed from a portion of the primary laser beam unobstructed by the object;
        a platform for supporting said object;
        a motion unit for providing rotational and vertical movement of said platform for disposing said object within said electromagnetic laser beam of energy, wherein said object obstructs a portion of said electromagnetic laser beam generated by said source; and
        a processor for processing said output signal from said electromagnetic laser beam receiver to form a composite profile of said object measured.

13.   (currently amended) A method for measuring the profile of an object comprising the steps of:

positioning said object on a platform of a motion unit;

providing a source for generating a primary laser beam of electromagnetic energy of a predetermined width;

vertically and rotationally disposing said object within said primary laser beam of electromagnetic energy using said vertical motion unit, said object obstructing a portion of said primary laser beam of electromagnetic energy;

receiving at least one secondary electromagnetic laser beam of energy within a receiving unit disposed opposite of said source, the secondary electromagnetic laser beam formed from a portion of the primary laser beam unobstructed by the object, said at least one secondary electromagnetic beam of energy [[has]] having a smaller width than said primary laser beam; and

processing an output signal proportional to a girth of said object being measured to form a composite profile of said object measured, said processing step consisting of measuring the at least one secondary electromagnetic laser beam and determining the difference between the width of the primary laser beam of electromagnetic energy and a width of the at least one secondary electromagnetic laser beam.

14.   (original) The method of claim 13 wherein said object is vertically positioned within said primary beam of electromagnetic energy by a vertical drive device for profiling a respective plane of said object.

15.   (original) The method of claim 13 wherein said object is rotationally positioned within said primary beam of electromagnetic energy by a rotational drive device for profiling a respective view within a respective plane of said object.

16.   (original) The method of claim 13 further comprising the step of transmitting said output signal to a computer for storing said composite profile.

17. (cancelled)

18. (cancelled)

19. (original) The method of claim 13 further comprising the step of determining a perpendicularity of said object.

20. (original) The method of claim 13 further comprising the step of determining a zero reference point for said object.

21. (new) The method of claim 19, where the step of determining the perpendicularity of said object includes:

centering a bottom of said object on the platform of the motion unit; and

measuring a displacement from a top-center of the object to a center of the platform, wherein the perpendicularity is determined.

22. (new) The method of claim 20, wherein the step of determining the zero reference point includes:

determining a height of the object prior to disposing said object within the primary laser beam;

moving the platform up to the height of the object; and

zeroing a value for vertical motion, wherein a zero reference point for said object is determined.

23. (new) The method of claim 13, wherein the step of vertically and rotationally disposing said object within said primary laser beam includes:

disposing a threaded portion of the object within said primary laser beam at various planes along the threaded portion of the object, wherein dimensional information from the threaded portion is determined.